

REMARKS

The present response is responsive to the Office Action dated November 13, 2007, where the Examiner has raised some objections to the specification and drawings, and has also rejected claims 1 to 8. It is believed that the foregoing amendment to the specification and claims deals with all outstanding objections and rejections, as explained below.

Objections to the Drawings and Specification

In paragraphs 1 and 2 of the Office Action, the Examiner objects that reference number 121 mentioned in the paragraph bridging pages 3 and 4 of the specification is not shown in the drawings. In the foregoing amendment to the specification, the paragraph which starts at the bottom of page 3 of the specification and continues on page 4 has been amended to delete the reference number 121 (both occurrences). This reference number is not needed since the clearance in the illustrated embodiment is the groove which already has a reference number 14, as stated in line 2 of the noted paragraph. It is submitted that this amendment deals with the objections in paragraphs 1 and 2, and reconsideration and reversal of the objections is respectfully requested.

35 U.S.C. 102(a) – Zhang

In paragraphs 4 and 5, the Examiner has rejected claims 1 to 8 as anticipated under 35 U.S.C. 102(a) by Zhang (CN 2522029Y). In making this rejection, the Examiner interprets the outer portion of the inner pipe (outside the Examiner's imaginary dotted line C) in Zhang as the "inner pipe" of claim 1, and the inner portion of the inner pipe inside line C as the "inner liner layer" of claim 1. In other words, different parts of the same pipe wall are defined as the inner pipe and the inner liner layer as claimed in claim 1. This interpretation is hereby respectfully traversed, and it is submitted that amended claim 1 is not anticipated by the Zhang Chinese patent reference.

For a reference to anticipate a claimed invention, the reference must include each and every element claimed. Referring to amended claim 1, the cited Zhang reference does not have an inner pipe which has an outer surface and an inner surface as well as a row of detent holes which each penetrate through the wall of the inner pipe from the outer surface to the inner surface. Instead, referring to the Examiner's Fig. A, the inner pipe in the Zhang reference has an outer surface A and an inner surface B, and recesses or indents A2 are formed in the outer surface which do not penetrate

the wall or extend up to inner surface B. Further, the Zhang reference has no separate inner liner layer fixed onto the inner surface B of the inner pipe. A part of a single pipe wall cannot be interpreted as a separate inner liner layer.

It is therefore submitted that amended claim 1 is not anticipated by the Zhang reference, and reconsideration and reversal of the rejection of this claim is respectfully requested.

Claims 2 to 8 depend from claim 1 and are distinguished from Zhang for the same reasons, and additionally since these claims define other elements not present in the reference. As regards the Examiner's rejection of claim 6, it is respectfully submitted that there is no way that part of a single wall can be considered to be both an inner pipe having an outer surface and an inner surface, and a separate inner liner tube also having an outer surface and an inner surface and covering detent holes which extend through the inner pipe from the outer surface to the inner surface. There is also no inner liner tube which has an axial groove in its outer surface. The Merriam-Webster online dictionary defines "surface" as:

"the exterior or upper boundary of an object or body <on the surface of the water> <the earth's surface>" <http://www.m-w.com/dictionary/surface>.

Thus, a surface is an exterior boundary of an object or body, and cannot be defined as equivalent to an imaginary line extending circumferentially within a tubular wall, as marked in the Examiner's drawings. The Zhang reference clearly does not have both an inner tube with outer and inner surfaces (or exterior boundaries) and an inner liner tube with outer and inner surfaces, let alone a groove in an outer surface of such an inner liner tube, but instead has only one inner tube with a single outer surface and a single inner surface, and a line of indents or depressions on the outer surface. In rejecting claim 6, the Examiner refers to arrow B3 in his drawing as designating a groove, but this is simply the inner surface of the inner tube itself, at the location of the indent or indents formed in the wall of that tube. It is not clear how the Examiner interprets this surface as a groove in an outer surface of an inner liner tube. Merriam-Webster's online dictionary referenced above defines a groove as "a long narrow channel or depression". Arrow B3 points to the inner protruding end of a depression or indent, and is neither elongate nor a depression in a surface. Claim 6 therefore defines several elements which are completely lacking from the Zhang reference.

As regards claim 7, the Zhang reference does not teach a clearance between the outer surface of an inner liner tube and an inner surface of an inner pipe, nor any detent pin penetrating into such a clearance in the locking state.

In rejecting claim 7, the Examiner contends that the clearance in Zhang is between an imaginary line C through the wall of the inner pipe and the inner end of the detents in the pipe. An imaginary line is not a surface (i.e. an exterior or boundary of a solid object), and the arrow E in the Examiner's Fig. B points to the inner end of a detent, i.e. part of the outer surface of the inner pipe. This is clearly completely different from a clearance between an actual outer surface or exterior of an inner liner tube and an actual inner surface of an inner pipe. The rejection of claim 7 based on the Zhang reference is therefore respectfully traversed, and reconsideration and reversal of this rejection is also respectfully requested.

The Examiner has also rejected claim 8 as anticipated by the Zhang reference, arguing that the arrow B4 in his Fig. B points to "end sealing members" as defined in this claim. This rejection is also respectfully traversed. First, as noted above in connection with claim 6, from which claim 8 depends, the Zhang reference does not have any axially extending groove in any surface, let alone such a groove in an outer surface of an inner liner tube (there is no such tube in the Zhang reference, which has only a single inner tube or pipe). Second, arrow B4 points only to the side wall of a single indent in the outer surface of the inner tube. The Examiner's Fig. B is equivalent to part of Fig. 1 of the Zhang reference, which is a longitudinal cross-sectional view showing a line of indents in inner tube 1. Arrow B4 represents the surface or side boundary of a single indent in an inner pipe, and is in no way equivalent to an "end sealing member" of an axially extending groove in an outer surface of a separate, inner liner tube as defined in claim 8.

In conclusion, it is respectfully submitted that claims 1 to 8 are not anticipated by Zhang. The unitary inner pipe in the Zhang reference cannot be defined as having four separate exterior surfaces, i.e. the outer and inner surface of an inner pipe and the outer and inner surface of an inner liner layer or tube, and there are no detent holes which extend through the wall of a pipe between its outer and inner surfaces in the this reference. Other elements of the dependent claims are also completely lacking from Zhang, as noted above. Reconsideration and reversal of the rejection of these claims is respectfully requested.

CONCLUSION

It is believed that the foregoing amendment deals with all outstanding grounds of objection and rejection, and that this application should now be in condition in all respects for allowance. Early notice to this effect is earnestly solicited.

If the Examiner has any questions or comments regarding the above Amendments and Remarks or believes that a telephone conversation may be useful in advancing prosecution, the Examiner is invited to contact the undersigned at the number listed below.

Respectfully submitted,
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